

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (currently amended) In a network having interconnected nodes with data tuples that represent nodal connections, a method for mapping a network topology by identifying changes between an existing topology and a new topology, the method comprising:

creating a plurality of tuples for a topology of a network, wherein the tuples represent nodal connections of the network and wherein each of the tuples comprises a host identifier, interface information, and a port specification;

~~converting an existing topology into a list of existing tuples that represent existing nodal connections;~~

receiving new tuples that represent new nodal connections; and

comparing the list of existing tuples with the new tuples to identify changes to the topology.

2. (original) The method of claim 1, further comprising updating a topology database with a new topology.

3. (original) The method of claim 1, further comprising taking action on the changes to the topology.

4. (canceled)

5. (original) The method of claim 1, wherein the step of comparing comprises identifying duplicate tuples that appear both in the list of existing tuples and in the new tuples, and maintaining a current status of the topology for these tuples.

6. (original) The method of claim 1, wherein the step of comparing comprises identifying a swapped port condition on a connector.

7. (original) The method of claim 1, wherein the step of comparing comprises searching for a host of a new singly-heard host link tuple or a new multi-heard host link tuple in the list of existing tuples.

8. (currently amended) A system for mapping a network topology by identifying changes between an existing topology and a new topology, based on changes to data tuples that represent nodal connections comprising:

a topology database that stores an existing topology of a network using tuples, wherein each tuple includes a host identifier, interface information, and a port specification for a node in the network; and

a topology converter connected to the topology database that receives new tuples that represent new nodal connections, and compares the new tuples with the existing topology to identify changes in the network by comparing the host identifiers, the interface information, and the port specifications.

9. (currently amended) The system of claim 8, wherein the topology converter creates the tuples for the topology of the network. ~~converts the existing topology into a list of existing tuples that represent existing nodal connections.~~

10. (original) The system of claim 8, wherein the topology converter updates the topology database with a new topology based on the new tuples.

11. (original) The system of claim 8, wherein the topology converter attempts to identify swapped ports on connectors.

12. (original) The system of claim 8, wherein the topology converter identifies duplicate tuples that appear both in the list of existing tuples and in the new tuples, and maintains a current status of the topology for these tuples.

13. (original) The system of claim 8, wherein the topology converter searches for a host of a new singly-heard host link tuple or a new multi-heard host link tuple in the list of existing tuples.

14. (original) The system of claim 8, wherein the topology converter searches for a connector of a new conflict links tuple in the list of existing tuples.

15. (currently amended) A computer-readable medium having computer-executable instructions for performing a method for mapping a network topology by

identifying changes between an existing topology and a new topology in a network having a interconnected nodes, the method comprising:

creating a plurality of tuples for a topology of a network, wherein the tuples represent nodal connections of the network and wherein each of the tuples comprises a host identifier, interface information, and a port specification;

~~converting an existing topology into a list of existing tuples that represent existing nodal connections;~~

receiving new tuples that represent new nodal connections;

comparing the list of existing tuples with the new tuples to identify changes to the topology; and

updating a topology database with a new topology based on the comparing.

16. (currently amended) The medium method of claim 15, wherein a topology converter receives the new tuples from a connection calculator that calculates connections between nodes.

17. (currently amended) The medium method of claim 15, wherein the step of comparing comprises identifying duplicate tuples that appear both in the list of existing tuples and in the new tuples, and maintaining a current status of the topology for these tuples.

18. (currently amended) The medium method of claim 15, wherein the step of comparing comprises identifying a swapped port condition on a connector.

19. (currently amended) The medium method of claim 15, wherein the step of comparing comprises searching for a host of a new singly-heard host link tuple or a new multi-heard host link tuple in the list of existing tuples.

20. (currently amended) The medium method of claim 15, wherein the step of comparing comprises searching for a connector of a new conflict links tuple in the list of existing tuples.